

Shodhdhara

An Automated Research Database Management System

Background

Research and Development is a very important component of any higher education system. Particularly, in the university system like IGNOU, research is done by the students as well as the teachers. Research Unit at IGNOU coordinates the research work of MPhil and PhD students in the university. A large number of research papers are published by the students and faculty. But, so far there is no system in the university to maintain the centralized database of students' profile, their research work, and research papers published by the faculty and students. If at any point of time some specific data is required instantly, it may not be possible to get information about the details of research students discipline wise, gender wise, category wise, etc. In such a situation, it becomes necessary to develop a system for maintaining and managing a centralized database of research students and their work in the University.

Need of the Innovation

Once the Research Unit was asked by the MHRD to give details of the SC/ST students pursuing research studies at IGNOU.



As the database was not readily available, it took so much time and effort to prepare consolidated list of SC/ST candidates. Thereafter, the Research Unit thought of developing a software to create a database of research students. The matter came to the NCIDE for software development. After going through the proposal of RU and visualizing the scope of research database management in the university, it was suggested to develop a complete database management system and a dynamic repository of research papers of teachers as well as students. This comprehensive research database management system was named as "ShodhDhara".

Description of the Innovation

Shodhdhara is a server based application designed and developed for development and management of research database of IGNOU students and faculty. The shodhdhara application has been developed on dotNet platform using SQL database. Shodhdhara has a home page as an open interface for the students and other stakeholders. It takes care of all kinds of activities pertaining to the research students starting from registration for

admission to final submission of the theses. The shodhdhara application has mainly following five modules :

1. Admission Module
2. Students' Module
3. Supervisor's Module
4. Programme Coordinator Module
5. Research Unit Module

The Admission Module is basically the first interface between prospective students and the university. Here students find all kinds of information related to university's research programmes, process of admission, instructions for filling the admission form, general guidelines and Research Degree Prospectus, etc. The access to the Online Admission Form is also given in the Admission Module. The Online Admission Form is designed on dotNet platform and it has six sections-Registration, Personal Profile, Educational Qualification, Document submission, Online Payment, Preview and Submission.

Students' Module is mainly meant for those candidates whose admission is confirmed and paid requisite fee. The authorized students can login the module and they can view their profile, announcements, if any, deposit fee, update their research progress and upload research papers or progress reports from time to time.

Supervisor Module is only for the research supervisors where the authorized supervisors can login and upload and view their profile. They can check the status of the students working under them and they can also approve pending requests of students, if any. Supervisors can view the list of candidates, add and view announcements for their students.

Through the Programme Coordinator Module authorized programme coordinators can view the profile of supervisors and students in their disciplines after authorized login. They can also generate different types of reports of the students pertaining to their discipline.

The Research Unit Module empowers the Research Unit to access the entire database of students, supervisors and programme coordinators. They can create more than one users and provide them authorized access for login. Research Unit can generate various kinds of reports, activate students by approving their admission, add students' supervisors and coordinators in the database, and they can add and view announcement for all the stakeholders. Shodhdhara is basically a very powerful tool for the Research Unit to develop and manage the all types of database pertaining to research students and other stakeholders.

Innovative Features

The Shodhdhara is the first online application of its kind which aims at managing all types of research database of a university. The innovative features of this platform are given below :

- It is a single window platform providing all types of information in a comprehensive manner to all the stakeholders involved in research degree programme in the University.
- It provides runtime up to date data of research students on various parameters.

- The facility of authorized access to the stakeholders enables them to update the information and database anytime from anywhere.
- It facilitates the stakeholders to generate various types of reports as and when required pertaining to research students, supervisors and programme coordinators, etc.
- Students can access their profile and update their status of progress anytime from anywhere.
- It is highly cost effective and easy to use the different modules of Shodhdhara.

Achievements

In the first phase, a prototype of ShodhDhara was developed in consultation with the Research Unit. Students Module, Supervisor's Module and Research Unit Modules were fully developed and tested. Initially, the work started in 2011 and completed for testing in 2013. Thereafter, because of unavoidable circumstances, the work got stuck. On pursuance of the Research Unit, the work on ShodhDhara again started in 2017. By this time priorities of Research Unit changed and they wanted a new module on online admission to be added in the application. In this phase, the Admission Module was designed, developed and tested on pilot basis.

But now the priorities and needs of the concerned division changed, new research ordinance came in existence, and new provisions of admission were added, so the earlier software was to be full overhauled.

Keeping in view the above mentioned challenges and barriers, the software design document was revised, new provisions made and priorities were redefined. Revision and updation of the Shodhdhara was re-started. Within about four months first two modules, i.e. Admission Module and Students Module were completed and tested in house. But unfortunately, the services of the programmer were terminated and this way again the work got stopped.

Applications and Uses of the Innovation

The Shodhdhara is highly useful application for development and management of research database in the University. Being a single window platform, it is a very student friendly system making it easier to use different modules without any problem. As all kinds of research database is available on server, it would be easier to access the data anytime from anywhere and generate various types of reports whenever required. All kinds of information related to the research programme, like research policy, guidelines, prospectus, etc. are available at one place through Shodhdhara.

Way Forward

Though, the Shodhdhara in the present format is very useful for development and management of research database in the university, it has scope of adding additional features in future. Students can be given facility to upload their research papers and other data for storage purpose as well as for review and use by other researchers.

A special module for IGNOU faculty can also be developed where each faculty member can be given a dashboard and authorized access to upload their research papers. This module can be made public for use and comment of other persons. This can be used as a complete database of research done by the IGNOU faculty and thus can have a pride in it.

Coordinator and Innovator

Dr. Oum Prakash Sharma

Period : 2011-2017